

عنوان مقاله:

Investigation of Zinc Supplement Impact on the Serum Biochemical Parameters in Pulmonary Tuberculosis: A Double Blinded Placebo Control Trial

محل انتشار:

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خلاصه مقاله:

Background: Zinc (Zn) is nutritionally essential trace element, and thus deficiency may severely affect human health. The results of cross-sectional studies indicate that micronutrient deficiencies are common in patients with tuberculosis. Our goal is to investigate whether Zn supplementation can increase the effects of anti-TB treatment or not. Methods: Patients with newly diagnosed tuberculosis were divided in to 2 groups. One group (n= 37) received capsule contains 50 mg of elemental zinc (as zinc sulfate) for 6 months every other day (micronutrient group) and Group II (n= 37) received placebo. Both groups received the same anti-tuberculosis treatment recommended by the WHO. Clinical examination, BMI, chest X-ray, direct sputum examination, assessment of serum zinc levels (by atomic absorption spectrophotometry), and biochemical markers serum concentration (by using an RA1000 AutoAnalyzer) were carried out before and after 2- and 6-months anti-tuberculosis treatment. Results: Plasma zinc concentrations in the micronutrient group was higher than placebo group After treatment. In the placebo group increasing in SGOT and SGPT concentrations were significantly higher than micronutrient group after 2 months of treatment ($p < 0.05$). The significant changes ($p < 0.05$) were observed on the serum levels of total protein, albumin. Alkaline phosphatase (ALP) levels, serum creatinine, uric acid and urea in groups were not significantly different. Conclusions: Zinc supplementation results in earlier sputum smear conversion in the micronutrient group during the first 6 weeks. Increased body weight and serum zinc and serum albumin and decrease in total protein was observed in the micronutrient group.

کلمات کلیدی:

.Anti-tuberculosis treatment, Pulmonary tuberculosis, Zinc

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